

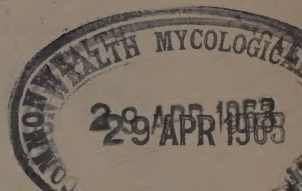


THE VETERINARY BULLETIN

1962

VOLUME 32

COMMONWEALTH BUREAU OF ANIMAL HEALTH
WEYBRIDGE, SURREY
ENGLAND





THE VETERINARY
BULLETIN

1962

VOLUME 33



**THE VETERINARY
BULLETIN**

1962

VOLUME 32

COMMONWEALTH BUREAU OF ANIMAL HEALTH
WEYBRIDGE, SURREY
ENGLAND



THE VETERINARY
BULLETIN

1962

VOLUME 32

Commonwealth Agricultural Bureaux

EXECUTIVE COUNCIL

<i>Member</i>	<i>Representing</i>
W. A. C. MATHIESON, C.M.G., M.B.E., (<i>Chairman</i>) ...	Dependent Territories
H. E. SENEVIRATNE (<i>Vice-Chairman</i>)	Ceylon
W. G. ALEXANDER, C.B.E.	United Kingdom
J. B. MARSHALL, Ph.D.	Canada
P. F. BUTLER	Australia
V. ARMSTRONG, Ph.D.	New Zealand
A. M. D'ROZARIO, Ph.D.	India
C. KEMAL REHEEM	Pakistan
J. A. AFARI	Ghana
TOH CHOR KEAT	Federation of Malaya
ISA MODIBBO	Federation of Nigeria
H.E. The High Commissioner	Sierra Leone
S. J. NTIRO	Tanganyika
J. E. C. COVENTRY	Federation of Rhodesia and Nyasaland
Sir THOMAS SCRIVENOR, C.M.G. (<i>Secretary</i>)	

COMMONWEALTH BUREAU OF ANIMAL HEALTH, WEYBRIDGE

Director:

M. CRAWFORD, M.R.C.V.S.

Assistant Director:

R. MACK, M.R.C.V.S.

Scientific Information Officers:

E. GLASNER, M.I.Inf.Sc.

E. V. LORD

M. G. GOTTS, M.A. (Cantab.)

T. E. GATT RUTTER, M.R.C.V.S., B.Sc.

F. EILEEN WILLIAMS, B.A.

Consultant Director:

A. W. STABLEFORTH, C.B., D.Sc.(London), M.R.C.V.S., D.V.S.M.

Director, Veterinary Laboratories and Veterinary Investigation Service, Ministry of
Agriculture, Fisheries and Food, Weybridge

Commonwealth Agricultural Bureaux

EXECUTIVE COUNCIL

<i>Member</i>	<i>Representing</i>
W. A. C. MATHIESON, C.M.G., M.B.E., (<i>Chairman</i>) ...	Dependent Territories
H. E. SENEVIRATNE (<i>Vice-Chairman</i>)	Ceylon
W. G. ALEXANDER, C.B.E.	United Kingdom
J. B. MARSHALL, Ph.D.	Canada
P. F. BUTLER	Australia
V. ARMSTRONG, Ph.D.	New Zealand
A. M. D'ROZARIO, Ph.D.	India
C. KEMAL REHEEM	Pakistan
J. A. AFARI	Ghana
TOH CHOR KEAT	Federation of Malaya
ISA MODIBBO	Federation of Nigeria
H.E. The High Commissioner	Sierra Leone
S. J. NTIRO	Tanganyika
J. E. C. COVENTRY	Federation of Rhodesia and Nyasaland
Sir THOMAS SCRIVENOR, C.M.G. (<i>Secretary</i>)	

COMMONWEALTH BUREAU OF ANIMAL HEALTH, WEYBRIDGE

Director:

M. CRAWFORD, M.R.C.V.S.

Assistant Director:

R. MACK, M.R.C.V.S.

Scientific Information Officers:

E. GLASNER, M.I.Inf.Sc.

E. V. LORD

M. G. GOTTS, M.A. (Cantab.)

T. E. GATT RUTTER, M.R.C.V.S., B.Sc.

F. EILEEN WILLIAMS, B.A.

Consultant Director:

A. W. STABLEFORTH, C.B., D.Sc.(London), M.R.C.V.S., D.V.S.M.
 Director, Veterinary Laboratories and Veterinary Investigation Service, Ministry of
 Agriculture, Fisheries and Food, Weybridge

REVIEW ARTICLES

	<i>Page</i>
Immunity in bovine mastitis, by J. B. Derbyshire	1
Applications of radioactive isotopes in veterinary medicine, by J. R. Holmes	65
Recent research on Johne's disease in the United Kingdom	
by J. Deans Rankin	127
Disorders of the digestive tract of domesticated rabbits, by R. Mack ...	191
Abortion and stillbirth in sheep, by W. A. Watson	259 & 335
Mycotoxicoeses in veterinary medicine, by M. Crawford	415
Some recently isolated viruses from cattle, by A. A. Huck	493
Chronic copper poisoning in farm animals, by J. R. Todd	573
Corynebacterium pseudotuberculosis and its role in diseases of animals,	
by C. L. Benham, A. Seaman & M. Woodbine	645
The virus pneumonias of cattle, by D. M. Berry	725

CONTENTS

	<i>Page</i>
Review Article	1
Diseases caused by Bacteria and Fungi	11
Diseases caused by Protozoan Parasites	25
Diseases caused by Viruses and Rickettsia	26
Immunity	39
Parasites in Relation to Disease [Arthropods]	40
Parasites in Relation to Disease [Helminths]	41
Spontaneous and Transmissible Neoplasms and Leucaemias [Including Fowl Paralysis]	44
Nutritional and Metabolic Disorders	45
Diseases, General	47
Poisons and Poisoning	51
Pharmacology and General Therapeutics	53
Physiology, Anatomy and Biochemistry	54
Public Health, Veterinary Services and Veterinary Education	57
Reproduction and Reproductive Disorders	58
Technique and Apparatus	61
Reports	62
Book Reviews	63
Books Received	64

VETERINARY INSURANCE SERVICES LIMITED

Directors

M. D. BERWYN-JONES, M.R.C.V.S.

A. C. S. EAGLES

R. J. HURST, F.C.I.B.

TAX FREE PENSION PROVISION

The Company's unique Veterinary Surgeon's Pension provides a tax-free income from age 65 or date of death, whichever is earlier until the 85th birthday. Thereafter, an annuity is payable so long as either the Veterinary Surgeon or his wife shall survive.

As in all V.I.S. contracts, waiver of premium benefit is available. This allows for the cessation of premiums in the event of disablement by sickness or accident for a period in excess of six months.

If you would like particulars, please complete and post the enquiry slip below.

To: THE VETERINARY INSURANCE SERVICES LTD.

131-133, New London Road, Chelmsford, Essex.

Please let me have details of:

THE VETERINARY SURGEON'S PENSION POLICY

Name

Address

.....

..... Tel. No.

Date of Birth Wife's date of Birth

The V.I.S. transacts all classes of insurances including the
**VETERINARY SURGEON'S PERSONAL AND
FAMILY POLICIES
SCHOLASTIC PLAN
SURGERY COMPREHENSIVE POLICY**

If you wish information regarding these or any other types of insurance please
indicate here

INDEX TO AUTHORS

- Abdulla Khan, O. K., 134.
 Adecock, J. L., 196.
 Adler, H. E., 87.
 Ahmed, Z., 192.
 Akkermans, J. P. W. M., 232.
 Albright, J. L., 237.
 Albu, T., 137.
 Alexander, L. T., 214.
 Alicata, J. E., 190.
 Allen, R. C., 38.
 Alton, G. G., 55.
 Anderson, C. K., 244.
 Anderson, D. E., 205.
 Andreev, Y., 230.
 di Antonio, E., 37.
 Ardhal, M., 68.
 Armeanu, G., 137.
 Armstrong, M. C., 24.
 Arseculeratne, S. N., 82.
 Asplin, F. D., 165.
 Auclair, M., 276.
 Bachrach, H. L., 105.
 Bader, J. P., 163.
 Baker, D. W., 72.
 Baker, J. M., 154.
 Bakos, K., 128.
 Bankowski, R., 85.
 Barnes, L. B., 9.
 Barnett, B. D., 46.
 Barrantes, R., 56.
 Beasley, J. N., 172.
 Beck, D., 242.
 Becker, D. E., 215.
 Beeson, W. M., 270.
 Bell, D. J., 239.
 Benedek, G., 280.
 de Benedetti, L. M. E., 53.
 Bentinck-Smith, J., 72.
 Béquignon, R., 98.
 Berchtold, M., 297.
 Berrios-Duran, L. A., 202.
 Berthrong, M., 92.
 Bhatt, P. L., 221.
 Bielanska, A., 18.
 Bierer, B. W., 46.
 Binato, L., 32.
 Björklund, N.-E., 248.
 Black, A. L., 209.
 Black, F. L., 153.
 Blake, J. T., 86.
 Blaxland, J. D., 17.
 Blood, D. C., 130, 131.
 Bogdon, T. R., 237.
 Bohman, V. R., 310.
 Bohn, F.-K., 189.
 Bordjochki, A., 99.
 Bourdin, P., 151.
 Bozhilov, K., 250.
 Braham, J. E., 219.
 Brass, W., 238.
 Bressani, R., 219.
 Brezina, R., 171.
 Brion, A., 84, page 64.
 Brown, K. I., 285.
 Brown, M. A., 209.
 Brown, R. D., 122.
 Brouwer, E., 282.
 Brunner, A., 168.
 Buhl, A., 116.
 Bulgini, M. J., 59.
 Buljevic, S., 186.
 Bull, L. B., 251.
 Busch, W., 28.
 Buschkiel, H., 15.
 Cacchione, R. A., 53, 59.
 Campion, R. L., 109.
 Carlson, C. W., 245.
 Carter, P. B., 3.
 du Casse, F. B. W., 204.
 Cavallero, G., 14.
 Cedro, V. C. F., 53, 56, 59.
 Chamberlain, D. E., 256.
 Chandler, R. L., 25.
 Chappel, C. L., 154.
 Chaumet, J., 10.
 Chawla, S. K., 117.
 Chell, R., 207.
 Chodkowski, A., 18.
 Chute, H. L., 44, 96.
 Circo, R., 47.
 Cissale, H. O., 53, 56.
 Clark, D. S., 33.
 Clutton-Brock, J., 263.
 Coffin, D. L., 162.
 Cohen, D., 157.
 Colinet, G., 179.
 Comar, C. L., 214.
 Corradini, L., 32.
 Cotzias, G. C., 312.
 Counts, G. W., 1.
 Crasquin, R., 265.
 Creek, R. D., 78.
 Cremonesi, G., 69.
 Csóka, R., 63.
 Cuperlovic, K., 104.
 el Dahaby, H., 132.
 Dale, O. N., 143.
 Dale, D. G., 154.
 Dalgaard-Mikkelsen, S., 247.
 Dannacher, G., 100.
 Das, M. S., 159.
 Dattilio, M., 252.
 Davis, D. E., 172.
 Davis, J. W., 38.
 Dean, D. J., 112.
 DeHaas, H., 44.
 DeLay, P. D., 110.
 Demaux, G., 276.
 Denis, B., 50.
 Desai, R. N., 298.
 DeVolt, H. M., 78.
 Dick, A. T., 251.
 Dickinson, A. M., 246.
 Dickinson, F. N., 303.
 Diderholm, H., 180.
 Diehl, J. F., 94.
 Dinter, Z., 128.
 Doguer, M., 48.
 Done, J. T., 136, 148.
 Dougherty, E., 164.
 Drury, A. R., 6.
 Edwards, S. J., 36.
 Eisa, A. M., 191.
 Elder, E. M., 225.
 Elsner, V. Y., 3.
 Enos, H. F., Jr., 182.
 Erne, K., 248.
 Every, R., 223.
 Eyles, D. E., 97.
 Fagard, P., 16.
 Fearn, J. T., 210.
 Férida, M., 100.
 Fell, B. F., 211.
 Fernandes, M. V., 106.
 Fesce, A., 181.
 Fey, H., 35.
 Filmer, J. F., 76.
 Fisher, H., 234.
 Fitzgerald, P. R., 200.
 Fontaine, M., 133.
 Fox, F. H., 72.
 Frank, N. A., 7.
 Frappier, A., 91.
 Frear, D. E. H., 182.
 Freedman, L. R., 242.
 Freeman, B. A., 47.
 Freudiger, U., 74.
 Fritsch, R., page 64.
 Fukui, M., 80.
 Füzi, M., 63.
 Gabel, A. A., 258.
 Gagne, B., 301.
 Gaillard, B. D. E., 282.
 Galloway, I. A., 103.
 Galvsh, F. T., 95.
 Ganowicz, M., 116.
 Gardner, D. E., 27.
 Garner, R. J., 317.
 Gassner, F. X., 296.
 Gatterdam, P. E., 256.
 Gatto, F. B., 109.
 Gericke, J. J., 21.
 German, A., page 64.
 Geroff, K., 266.
 Gershman, M., 44.
 Georubin, L., 187.
 Giacomini, A., 252.
 Glasgow, J. P., 183.
 Glawischig, E., 236.
 Godfrey, J. F., 33.
 Goldberg, H. S., 159.
 Goret, P., 138.
 Gorzelewska, K., 255.
 Goto, T., 267, 277.
 Gowe, R. S., 290.
 Graber, M., 197.
 Greene, J. W., 70.
 Griminger, P., 234.
 Gross, W. B., 40, 160.
 Grossklau, D., 294.
 Groulade, P., 155.
 Guilhon, J., 197.
 Guillon, J. C., 146, 169.
 Guzmán, M. A., 219.
 Hafez, E. S. E., 302.
 Hahn, W. E., 51.
 Hallgren, W., 248.
 Hamed, M. Y., 278.
 Hammer, D., 5.
 Hammon, W. McD., 157.
 Hanke, H. E., 218.
 Hansen, N. F., 123.
 Hanson, L. E., 60.
 Hanson, R. P., 64.
 Haraszti, J., 292.
 Hardy, E. P., 214.
 Hare, W. V., 231.
 Hartley, W. J., 123.
 Hasumi, K., 113.
 Hauschild, A. H. W., 49.
 Hawk, H. W., 89.
 Hawkins, W. W., Jr., 213.
 Hay, G. K. Baron, 313.
 Hazard, E. C., 1.
 Hazel, L. N., 305.
 Hearn, H. J., Jr., 114.
 van Heerden, A., 129.
 van Heerden, K. M., 227.
 Heida, J., 304.
 Helf, H., 26.
 Hellmann, E., 52.
 Hennessey, J. A., 9.
 Herriott, R. M., 176.
 Hersey, D. F., 156.
 Hill, C. H., 201.
 Hiroe, K., 291.
 Hitchner, S. B., 161.
 Hoag, W. G., 42.
 Hodgekinson, A., 243, 244.
 Hoffman, G., page 64.
 Hofstad, M. S., 166.
 Hogue, D. E., 214.
 Holz, R. C., 270.
 Hopkins, D. E., 256.
 Hore, D., 253.
 Hubrig, T., 54.
 Huck, R. A., 126.
 Hudson, C. B., 234.
 Hurst, A., 39.
 Hussein, N., 132.
 Hüssel, L., page 64.
 Hwang, J., 164.
 Hwang, J. C., 198.
 Van Iderstine, A., 246.
 Ingram, J. T., 296.
 Irzhak, L. I., 268.
 Ivanicová, S., 135.
 Jacotot, H., 146.
 Jamieson, S., 123.
 Janowski, H., 139.
 Jayaraman, M. S., 67.
 Jennings, S., 259.
 Jensen, A. H., 215.
 Jiro, J., 209.
 Johke, T., 267.
 Johnston, J. B., 136.
 Jordan, R. M., 218.
 Jovanic, M., 194.
 Juskiewicz, T., 255.
 Kabat, C., 90.
 Kaackenbeck, A., 179.
 Kaneko, 209.
 Karstad, L., 64.
 Kassem, H., 124.
 Katiyar, R. D., 183.
 Kenz, S. G., 208.
 Kingscote, A. A., 199.
 Kistler, B. G., 94.
 Kleeberg, H. H., 21.
 Kleiber, M., 209.
 Klimes, B., 254.
 Knolle, I., 15.
 Kobayashi, S., 195.
 Koch, J. H., 233.
 Kochanski, J., 50.
 Kohli, R. N., 221.
 Kono, M., 195.
 Kraay, G. J., 282.
 Krauss, S., 150.
 Krishnamurthy, D., 127.
 Krista, L. M., 245.
 Kross, D. J., 47.
 Kruza, B., 254.
 Künzel, E., 275.
 Kume, S., 195.
 Kunkel, H. O., 281.
 Kuntze, A., 233.
 Laffer, N. C., 78.
 Lambin, S., page 64.
 Lascelles, A. K., 309.
 Leemann, W., 229.
 Lehmann-Grube, F., 174.
 Leidl, W., 297.
 Lemcke, R. M., 39.
 Lesperance, A. L., 310.
 Levaditi, J., 146.
 Levine, N. D., 315.
 Likhatchev, N. V., 141.
 Lindt, S., 74.
 Lingard, D. R., 60.
 Lobl, K., 271.
 Lodge, G. A., page 64.
 Łosieczka, K., 19.
 Low, J. B., 200.
 Lucam, F., 100.
 Lucas, I. A. M., page 64.
 Lucas, M. H., 212.
 Luoto, L., 173.
 Luttrell, O. N., 158.
 Lynch, L. C., 43.
 Lynd, F. T., 190.
 McCulloch, B., 12.
 McGregor, J. K., 199.
 McIntosh, L. G., 123.
 McMartin, D. A., 87.
 McTavish, J. F., 1.
 Maestroni, G., 162.
 Magat, A., 100.
 Maghami, G., 61.
 Maglione, E., 14.
 Mallik, B. B., 67.
 Mann, T., 295.
 Marazza, V., 187.
 Maré, J., 129.
 Margadant, A., 35.
 Marsh, H., 316.
 Martinez, E. S., 59.
 Martins Mendes, A., 145.
 Marty, E. W. Jr., 68.
 Masaki, J., 291.
 Mason, N. R., 296.
 Matrischeck, P. H., 43.
 Maurer, F. D., 156.
 Mavhew, R. L., 188.
 Maynone, B., 252.
 Mayr, A., 147.
 Meshkov, N. V., 75.
 Mever, A., 216.
 Micicovsky, B. B., 222.
 Mihajlovic, S. M., 314.
 Mills, C. F., 211.
 Miner, M. L., 2, 3.
 Mitrovic, M., 43.
 Montemagno, F., 22.
 Morgan, H. R., 163.
 Morris, B., 509.
 Moule, G. R., 226, 300.
 Movsesian, M., 194.
 Mulak, K., 18.
 Muller, G. L., 193.
 Murray, R. B., 130.
 Murty, D. K., 11.
 Mylrea, P. J., 293.
 Naber, E. C., 288.
 Nai, D. D., 20.
 Naik, K. C., 289.
 Nakajima, T., 269.
 Nasr, H., 278.
 Nehring, K., 249.

Author Index

- Nejia, M. J., 73.
 Nevenic, V., 194.
 Newberne, P. M., 231.
 Nica, A., 137.
 Nikolic, P., 29.
 Norcross, N. L., 107.
 Notsuki, I., 277.
 Nüssel, M., 238.
- Obel, A.-L., 152.
 Oberfeld, H., 140.
 O'Dell, K., 273.
 Ohishi, I., 195.
 Okazaki, W., 208.
 Olson, O. E., 245.
 O'Meara, D. C., 96.
 Otsuka, J., 269.
 Ott, W. H., 246.
- Padgett, G. A., 83.
 Page, L. A., 170.
 Palm, C. R., 153.
 Panda, B., 78.
 Pande, P. G., 127.
 Pangborn, J., 170.
 Papavasiliou, P. S., 312.
 Paplanus, S., 242.
 Patty, R. E., 107.
 Pavia, R. A., 157.
 Peebles, R. M., 212.
 Perez Mesa, C., 92.
 Perini, G., 20.
 Perk, K., 271.
 Perry, T. W., 270.
 Persiani, G., 187.
 Petit, C., 169.
 Petrovitch, Z., 99.
 Pickens, E. G., 173.
 Pier, A. C., 73.
 Pinkiewicz, E., 241.
 Pivnick, H., 49.
 Platt, B. S., 216, 217.
 Platt, H., 104.
 La Polla, L., 206.
 Polo Jover, F., 144.
 Polyakova, O. A., 23.
 Pond, W. G., 214.
 Popa, M., 137.
 Pouden, W. D., 7.
 Prigal, S. J., 178.
 Provost, A., 119.
 Prudovsky, S., 158.
 Pulsford, M. F., 167.
 Pun, C. F., 306.
 Te Punga, W. A., 123.
 Purton, M. J., 243.
 Pyrah, L. N., 243, 244.
- Quentin, J., 265.
- Radek, W., 31.
 Rafyi, A., 61, 68, 115.
 Ramoni, G., 93.
- Rasmussen, F., 247.
 Reed, G. W., 6.
 van Rees, A. L. A., 228.
 Remmler, F. W., 199.
 Renault, L., 169.
 Rendel, J., 301.
 van Rensburg, S. J., 223.
 de Repentigny, J., 91.
 Reynolds, I. M., 62.
 Ribeiro, J. M., 106.
 Rikimaru, M. T., 95.
 Ristic, M., 11.
 Ritchie, L. S., 202.
 Roberts, H. E., 136.
 Rodriguez, J. G., 184.
 Rogers, J., 42.
 Roisman, B., 158.
 Rothschild, 319.
 Routh, J. L., 1.
 Rowsell, H. C., 131.
 Rozemeyer, H., 110.
 Rubin, R., 191.
 Rühlmann, D., page 64.
 Russell, J. H., 111.
 Ryashchenko, L. P., 65.
- Sabban, M. S., 132.
 Saez, H., 81.
 Salisbury, G. W., page 64.
 Salisbury, R. M., 123.
 Salmon, W. D., 231.
 Samol, S., 140.
 Sanchez Botija, C., 144.
 Sasahara, J., 142.
 Savan, M., 131.
 Savard, K., 296.
 Savin, Z., 99.
 Sawada, T., 195.
 Scarnell, J., 71.
 Schmidt-Nielson, B., 273.
 Schnurrenberger, P. R., 111.
 Schoenaers, F., 179.
 Schoenhard, D. E., 83.
 Schultz, L. C., 238.
 Schumaier, G., 78.
 Scott, G. R., 120, 121, 122.
 Seelemann, M., 15.
 Seetharaman, C., 118.
 Sepic, M., 29.
 Sergeant, G., 98.
 Serres, H., 151.
 Sevelius, F., 243.
 Sherman, I., 112.
 Shumard, R. F., 95.
 Simesen, B., 257.
 Simitch, T., 99.
 Simon, K. J., 272.
 Simonnet, H., 276.
 Sinha, K. C., 117, 118.
 Skinner, P. E., 205.
 Smart, R. A., 2.
 Smbert, R. M., 38.
 Smith, A. U., page 64.
- Smith, I. M., 1.
 Smith, R. E., 62.
 Smith, W. W., 3.
 Sofrenovic, D., 186, 194.
 Sokolic, A., 194.
 Soliman, F. A., 278.
 Sonea, S., 91.
 Southcott, W. H., 226.
 Spörri, H., 229.
 Stabler, R. M., 92.
 Stanojevic, S., 186.
 Steffert, I., 212.
 Stellmach-Helwig, R., 88.
 Stepanishcheva, Z. G., 77.
 Stewart, R. E., 279.
 Stewart, R. J. C., 216, 217.
 Stirling-Moczy, M., 57.
 Stock, B. L., 79.
 Stock, J. E., 264.
 Stonebrink, B., 13.
 Storz, J., 170.
 Straub, M., 70.
 Styk, B., 307.
 Subak-Sharp, H., 108.
 Swingle, K. F., 213.
 Swisher, S. N., 177.
 Sykes, J. F., 89.
 Szent-Ivanyi, T., 149.
 Szutter, L., 274.
- Taneja, G. C., 290.
 Tarocco, C., 207.
 Tavernor, W. D., 261.
 Tejada, O., 219.
 Teklinski, A., 50.
 Temple, R. S., 305.
 Tereszczuk, S., 81.
 Tereszczukowa, M., 50.
 Terrill, S. W., 215.
 Tessmer, C. F., 235.
 Thienpont, D., 16.
 Thomas, J., 45.
 Thomas, J. A., 3.
 Thompson, S. W., 237.
 Thormar, H., 175.
 Thorpe, W. H., 318.
 Tiberio, M., 252.
 Tien-Hsi Cheng, 182.
 Tomanovitch, B., 99.
 Tomar, N. S., 298.
 Tomizuka, T., 291.
 Torlone, V., 37.
 Touchberry, R. W., 303.
 Train, G., 30.
 Trainor, D. O., Jr., 64, 90.
 Trautman, R. J., 70.
 Truillo R., R. A., 41.
 Tubliah, H. S., 308.
 Tuckey, S. L., 287.
 Turner, G. D., 89.
 Turner, H. N., 283.
 Tustin, R. C., 129.
- Ugueto T., C., 41.
- Urvölgyi, J., 171.
 Useche F., J. A., 41.
- Valentine, H. D., 40.
 Vallée, A., 146.
 Vanek, J., 224.
 Varna, A. K., 185.
 Vaughan, L. C., 260.
 Velten, U., 284.
 Verter, W., 203.
 Vial, G., 98.
 Villemot, J.-M., 119.
 Virat, B., 146.
 Vohl, G., 4.
 Vysotskii, B. V., 65.
- Waites, G. M. H., 300.
 Wales, R. G., 299.
 Wallwork, J. A., 184.
 Ware, G. W., 238.
 Warren, A. G., 262.
 Watkins, J. R., 172.
 Watson, R. H., 225, 311.
 Watts, P. S., 167.
 Weaver, B. M., Q., 263.
 Webb, S. J., 34.
 Weber, W., 220.
 Weiss, H. S., 234.
 Welz, W., 8, 284.
 Werner, A. S., 242.
 Westhues, M., page 64.
 Weyland, H., 21.
 Wharton, R. H., 97.
 White, I. G., 299.
 Wiedermann, G., 58.
 Wilde, J. K. H., 120.
 Willers, E. H., 73.
 Williams, J. C., 138.
 Williams, R. B., 211.
 Winterfeld, R. W., 161.
 Witter, R. L., 96.
 Wittmann, G., 101.
 Wittrick, D. A., 136.
 Woernle, H., 168.
 Wollrab, J., 23.
 Wood, G. F., 311.
 Woods, G. T., 287.
 Worker, N. A., 222.
- Yasuda, J., 80.
 Yeck, R. G., 279.
 Yohn, D. S., 157.
 Yost, D. H., 237.
 Young, L. E., 177.
 Young, S., 213.
 Yuill, T. M., 200.
- Zacchi, B., 22.
 Zangwill, O. L., 318.
 Zarkower, A., 90.
 Zimmerman, R. E., 201.
 Zlotnik, I., 133.
 Zulinski, T., 240.

The Executive Council of the Commonwealth Agricultural Bureaux is a signatory to the Fair Copying Declaration, details of which can be obtained from the Royal Society, Burlington House, London, W.1.

ADVERTISEMENTS

Advertisements are accepted for publication in The Veterinary Bulletin. All details can be obtained from the Advertisement Contractors, Cowlishaw & Lawrence (Advertising) Ltd., Memorial Hall Buildings, 16 Farringdon Street, London, E.C.4. Telephone City 3718.

The Commonwealth Agricultural Bureaux organization does not accept responsibility for any of the trade advertisements included in this publication.